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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,353	12/07/2000	Peter Galyas	031941-088	1687

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EXAMINER	
MARCELO, MELVIN C	

ART UNIT	PAPER NUMBER
2663	6

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/732,353	GALYAS ET AL.	
	Examiner	Art Unit	
	Melvin Marcelo	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-24,26-31 and 33-36* is/are rejected.

7)☒ Claim(s) *25 and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 19, 20, 23, 24, 26-29, 33 and 34 are rejected under 35 U.S.C. 102(a) as being anticipated by Koistinen et al. (WO 99/21383).

With respect to the claims, references to Koistinen appears in parenthesis.

19. A mobile communication system supporting communication of data **(Koistinen, page 2, lines 1-6)** *and comprising at least one base station* **(Figure 1, base station 1)** *connected to a switching arrangement* **(MSC)** *over a connection* **(4)** *and using a communication protocol* **(ATM)** *for communication between a mobile station* **(MS)** *and the switching arrangement* **(MSC)**, *wherein:*
(a) the connection between the base station and the switching arrangement supporting packet switched non-transparent communication of data transported as data frames **(Page 6, lines 8-24, the ATM connection is non-transparent since frames with errors are not converted or forwarded)**;
(b) the base station includes means for detecting if data frames sent from the mobile station are correctly received over the air interface **(PCM/ATM 3 and page 6, lines 8-24)**, *and means for sending only data frames detected as correctly received on to the switching arrangement using the packet switched connection between the base station and the switching arrangement* **(PCM/ATM 3 and page 6, lines 8-24)**.
20. The system of claim 19, wherein the non-transparent communication of data transported as data frames is established on the uplink from the mobile station **(Page 8, lines 17-22)**.
23. The system of claim 19, wherein the switching arrangement comprises a Mobile Switching Center **(Figure 1, MSC)**.
24. The system of claim 19, wherein: the switching arrangement comprises a Base Station Controller **(Figure 7, BSC)**; *the base station* **(Base station 1)** *comprises a Base Transceiver Station* **(BTS1)**; *and packet switched communication of data is supported at*

least on the uplink between the Base Transceiver Station and the Base Station Controller **(PCM/ATM 3 and ATM/PCM 7 in base station 1, and page 8, lines 17-22)**.

26. The system of claim 19, wherein the packet switched communication of data is supported between the base station and the switching arrangement on the downlink **(Page 8, lines 17-22)**.

27. A mobile communication system supporting communication of packet data **(Page 5, line 24 to page 6, line 7)** *and comprising at least one base station* **(Figure 1, base station 1)** *connected to a switching arrangement* **(MSC)** *over a connection* **(4)** *and using a communication protocol for communication between the mobile station and the switching arrangement* **(ATM)**, *wherein: the connection between the base station and the switching arrangement supports packet switched non-transparent communication of data as data frames* **(Page 6, lines 8-24, the ATM connection is non-transparent since frames with errors are not converted or forwarded)**; *the base station* **(Base station 1)** *includes: means for detecting if data frames sent from the mobile station are correctly received over the air interface* **(PCM/ATM 3 and page 6, lines 8-24)**, *and means for sending only data frames detected as correctly received on to the switching arrangement using the packet switched connection between the base station and the switching arrangement* **(PCM/ATM 3 and page 6, lines 8-24)**.

28. The system of claim 27, wherein the packet switched communication is supported on the downlink from the switching arrangement to the base station **(Page 8, lines 17-22)**.

29. A method of transmitting data in a mobile communication system, the method comprising the steps of establishing a non-transparent data connection between a mobile station and a switching arrangement **(Page 6, lines 8-24, the ATM connection is non-transparent since frames with errors are not converted or forwarded)**, *comprising an air interface between the mobile station and a base station* **(Figure 1, MS and BTS1)** *and a packet switched connection* **(ATM)** *between the base station* **(Base station 1)** *and the switching arrangement* **(MSC)**; *detecting in the base station if data frames sent from the mobile station are correctly received over the air interface* **(Page 6, lines 8-24)**; *and sending only data frames detected as correctly received on to the switching arrangement using the packet switched connection between the base station and the switching arrangement* **(Page 6, lines 8-24)**.

33. The method of claim 29, further comprising the step of: implementing packet switched transmission on the downlink from the switching arrangement to the base station **(Page 8, lines 17-22)**.

34. A method of transmitting data in a mobile communication system supporting communication of packet data **(Page 5, line 24 to page 6, line 7)**, *the method comprising the steps of establishing a non-transparent data connection between a mobile station and a switching arrangement* **(Page 6, lines 8-24, the ATM connection is non-transparent since frames with errors are not converted or forwards)**, *comprising an air interface between the mobile station and a base station* **(Figure 1, MS and BTS1)** *and a packet switched connection* **(ATM)** *between the base station* **(Base station 1)** *and the switching arrangement* **(MSC)**; *detecting in the base station if data frames sent from the mobile station are correctly received over the air interface* **(Page 6, lines 8-24)**; *and sending only data frames detected as correctly received on to the switching arrangement using the packet switched connection between the base station and the switching arrangement* **(Page 6, lines 8-24)**.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 21, 30, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koistinen et al. in view of Suvanen (US 6633536 B1).

Koistinen teaches that the incorrectly received frames are found by detecting the Bad Frame Indicator (page 6, lines 8-16). Koistinen does not teach that the means for detecting comprises means for calculating a frame checksum for a received data frame. However, Koistinen does teach that the frame type used on the ATM connection includes CRC bits (page 8, line 36 to page 9, line 3). Koistinen's invention is directed to the GSM mobile communication system (page 2, lines 1-6). A skilled artisan would

have been motivated to incorporate features found in other GSM mobile communication system since they both conform to the GSM standard. Suvanen is another GSM mobile communication system (column 1, lines 23-25), wherein the CRC bits are used to calculate a frame checksum in order to determine whether the frame was received correctly (column 2, lines 2-30) and the CRC bits are substitutes for the Bad Frame Indicator (column 2, lines 30-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to calculate a frame checksum from the CRC bits in Koistinen in order to determine whether the frame was received correctly since Suvanen teaches that the CRC bits are used in this manner as substitutes for the Bad Frame Indicator in GSM systems. With respect to the claims, references to the prior art appear in parenthesis.

21. The system of claim 20, wherein the means for detecting comprising means for calculating a frame checksum for a received data frame **(Suvanen, column 2, lines 2-32).**
30. The method of claim 29, wherein the step of detecting comprises using a frame checksum defined in the non-transparent data protocol to establish if the data frames are correctly received **(Suvanen, column 2, lines 2-32).**
35. The method of claim 34, wherein the step of detecting comprises using a frame checksum, defined in the non-transparent data protocol, to establish if the data frames are correctly received **(Suvanen, column 2, lines 2-32).**
36. The method of claim 35, further comprising the step of implementing packet switched transmission on the downlink from the switching arrangement to the base station **(Koistinen, Page 8, lines 17-22).**

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koistinen et al. and Suvanen as applied to claim 21 and further in view of Ekudden et al. (US 6122607).

Neither Koistinen nor Suvanen teach that the quality of the radio transmission is detected to detect if a data frame is correctly received. Ekudden teaches that the Bad Frame Indicator can be used to reflect the quality of the frame (column 12, lines 29-45). Therefore, it would have been obvious to detect the quality of the radio transmissions in Koistinen since a skilled artisan would have been motivated to incorporate Ekudden's explicit teachings in using the Bad Frame Indicator of Koistinen (page 6, lines 8-16) to reflect the quality of the radio transmission. With respect to the claims, references to the prior art appear in parenthesis.

22. The system of claim 21, wherein the quality of the radio transmission is detected in the base station to detect if a data frame is correctly received **(Ekudden, column 12, lines 29-45).**

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koistinen et al. in view of Ekudden et al.

Similar to above with respect to claim 22, it would have been obvious to detect the quality of the radio transmissions in Koistinen since a skilled artisan would have been motivated to incorporate Ekudden's explicit teachings in using the Bad Frame Indicator of Koistinen (page 6, lines 8-16) to reflect the quality of the radio transmission. With respect to the claims, references to the prior art appear in parenthesis. With respect to the claims, references to the prior art appear in parenthesis.

31. The method of claim 29, further comprising the step of: performing radio quality measurements in the base station to establish if data frames are correctly received over the air interface from the mobile station **(Ekudden, column 12, lines 29-45).**

Allowable Subject Matter

7. Claims 25 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to anticipate or make obvious the additional features associated with these claims.

25. The system of claim 24, wherein: the Base Station Controller includes transcoding and adapting means for communication with an interworking function of a mobile switching center which comprises means for building frames for transportation of data; and the transcoding and adapting means detects if frames received from the mobile switching center contain data and sending only data frames on to the base station.
32. The method of claim 30, further comprising the step of: detecting in the base station if a received time slot from the mobile station is symmetrical, and, only if the time slot is symmetrical, sending data packets over the packet switched connection to the switching arrangement.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Marcelo whose telephone number is 703-305-4373. The examiner can normally be reached on Monday-Friday, 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melvin Marcelo
Primary Examiner
Art Unit 2663

Mm
March 18, 2004